

STANDARD INSPECTION REPORT OF A GAS DISTRIBUTION OPERATOR

A completed **Standard Inspection Report** is to be submitted to the Director within 60 days from completion of the inspection. A **Post Inspection Memorandum (PIM)** is to be completed and submitted to the Director within 30 days from the completion of the inspection, or series of inspections, and is to be filed as part of the **Standard Inspection Report**. Refer to the last page of this form for **PIM** example entries.

Inspection Report		Post Inspection Memorandum	
Inspector/Submit Date: _____		Inspector/Submit Date: _____	
		Peer Review/Date: _____	
		Director Approval/Date: _____	
POST INSPECTION MEMORANDUM (PIM)			
Name of Operator:		OPID #:	
Name of Unit(s):		Unit #(s):	
Records Location:			
Unit Type & Commodity:			
Inspection Type:		Inspection Date(s):	
OPS Representative(s):		AFO Days:	
Summary:			
Findings:			

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Name of Operator:			
HQ Address:		System/Unit Address:	
Co. Official:		Activity Record ID No.:	
Phone No.:		Phone No.:	
Fax No.:		Fax No.:	
Emergency Phone No.:		Emergency Phone No.:	
Persons Interviewed	Title	Phone No.	
Company System Maps (Copies for Region Files):			
Unit Description:			
Portion of Unit Inspected <i>(not required if covered in the PIM):</i>			

For gas transmission and distribution operator inspections, the attached evaluation form should be used in Conjunction with 49 CFR 191 and 192 during OPS inspections.

STANDARD INSPECTION REPORT OF A GAS TRANSMISSION PIPELINE

Unless otherwise noted, all code references are to Part 192.

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked

GAS SYSTEM OPERATIONS		
Gas Supplier		Date:
Unaccounted for Gas:		Services: Residential Commercial Industrial Other
Operating Pressure(s):	MAOP (Within last year)	Actual Operating Pressure (At time of Inspection)
Feeder:		
Town:		
Other:		

Does the operator have any transmission pipelines?
For compressor station inspections, use Attachment 4.

PART 191									
REPORTING PROCEDURES					S	U	N/A	N/C	
.605(b)(4)	Procedures for gathering data for incident reporting								
	191.5	Telephonically reporting incidents to NRC (800) 424-8802							
	191.15(a)	30-day follow-up written report (Form 7100-2)							
	191.15(b)	Supplemental report (to 30-day follow-up)							
.605(a)	191.23	Reporting safety-related condition (SRCR)							
	191.25	Filing the SRCR within 5 days of determination, but not later than 10 days after discovery							
.605(d)	Instructions to enable operation and maintenance personnel to recognize potential Safety Related Conditions								

Comments: (If any of the above are marked U, N/A, or N/C, please indicate why, either in this box or in a referenced note.)	

PART 192								
CUSTOMER NOTIFICATION PROCEDURES					S	U	N/A	N/C
.13(c)	.16	Procedures for notifying new customers, within 90 days , of their responsibility for those selections of service lines not maintained by the operator.						
EXCESS FLOW VALVE INSTALLATION / NOTIFICATION								
	.383	Does the operator have a voluntary installation program for excess flow valves and does the program meet the requirements outlined in §192.383? Are records adequate?						
	.381	If EFVs are installed, do they meet the performance requirements of §192.381?						
	.383	If the operator does not have a voluntary program for EFV installations, are customers notified in accordance with §192.383? Are records adequate?						

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.605(a)	NORMAL OPERATING PROCEDURES		S	U	N/A	N/C
	.605(a)	O&M Plan review and update procedure (1 per yr/15 months)				
	.605(b)(3)	Making construction records, maps, and operating history available to appropriate operating personnel				
	.605(b)(5)	Start up and shut down of the pipeline to assure operation within MAOP plus allowable buildup				
	.605(b)(8)	Periodically reviewing the work done by operator's personnel to determine the effectiveness and adequacy of the procedures used in normal operation and maintenance and modifying the procedures when deficiencies are found				
	.605(b)(9)	Taking adequate precautions in excavated trenches to protect personnel from the hazards of unsafe accumulations of vapors or gas, and making available when needed at the excavation, emergency rescue equipment, including a breathing apparatus and, a rescue harness and line				
	.605(b)(10)	Routine inspection and testing of pipe-type or bottle-type holders				
	.605(b)(11)	Responding promptly to a report of a gas odor inside or near a building, unless the operator's emergency procedures under §192.615(a)(3) specifically apply to these reports				

Comments: (If any of the above are marked U, N/A, or N/C, please indicate why, either in this box or in a referenced note.)

.605(a)	TRANSMISSION ABNORMAL OPERATING PROCEDURES		S	U	N/A	N/C
	.605(c)(1)	Procedures for responding to, investigating, and correcting the cause of:				
		(i) Unintended closure of valves or shut downs				
		(ii) Increase or decrease in pressure or flow rate outside of normal operating limits				
		(iii) Loss of communications				
		(iv) The operation of any safety device				
		(v) Malfunction of a component, deviation from normal operations or personnel error				
	.605(c)(2)	Checking variations from normal operation after abnormal operations ended at sufficient critical locations				
	.605(c)(3)	Notifying the responsible operating personnel when notice of an abnormal operation is Received				
	.605(c)(4)	Periodically reviewing the response of operating personnel to determine the effectiveness of the procedures and taking corrective action where deficiencies are found				

Comments: (If any of the above are marked U, N/A, or N/C, please indicate why, either in this box or in a referenced note.)

.605(a)	CHANGE in CLASS LOCATION PROCEDURES		S	U	N/A	N/C
	.609	Class location study				
	.611	Confirmation or revision of MAOP				

Comments: (If any of the above are marked U, N/A, or N/C, please indicate why, either in this box or in a referenced note.)

.613	CONTINUING SURVEILLANCE PROCEDURES		S	U	N/A	N/C
	.613(a)	Procedures for surveillance and required actions relating to change in class location, failures, leakage history, corrosion, substantial changes in CP requirements, and unusual operating and maintenance conditions				
	.613(b)	Procedures requiring MAOP to be reduced, or other actions to be taken, if a segment of pipeline is in unsatisfactory condition				

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.605(a)	DAMAGE PREVENTION PROGRAM PROCEDURES		S	U	N/A	N/C
	.614	Participation in a qualified one-call program, or if available, a company program that complies with the following:				
	(1)	Identify persons who engage in excavating				
	(2)	Provide notification to the public in the One Call area				
	(3)	Provide means for receiving and recording notifications of pending excavations				
	(4)	Provide notification of pending excavations to the members				
	(5)	Provide means of temporary marking for the pipeline in the vicinity of the excavations				
	(6)	Provides for follow-up inspection of the pipeline where there is reason to believe the pipeline could be damaged				
	(i)	Inspection must be done to verify integrity of the pipeline				
	(ii)	After blasting, a leak survey must be conducted as part of the inspection by the operator				

Comments: (If any of the above are marked U, N/A, or N/C, please indicate why, either in this box or in a referenced note.)

.615	EMERGENCY PROCEDURES		S	U	N/A	N/C
	.615(a)(1)	Receiving, identifying, and classifying notices of events which require immediate response by the operator				
	.615(a)(2)	Establish and maintain communication with appropriate public officials regarding possible emergency				
	.615(a)(3)	Prompt response to each of the following emergencies:				
	(i)	Gas detected inside a building				
	(ii)	Fire located near a pipeline				
	(iii)	Explosion near a pipeline				
	(iv)	Natural disaster				
	.615(a)(4)	Availability of personnel, equipment, instruments, tools, and material required at the scene of an emergency				
	.615(a)(5)	Actions directed towards protecting people first, then property				
	.615(a)(6)	Emergency shutdown or pressure reduction to minimize hazards to life or property				
	.615(a)(7)	Making safe any actual or potential hazard to life or property				
	.615(a)(8)	Notifying appropriate public officials required at the emergency scene and coordinating planned and actual responses with these officials				
	.615(a)(9)	Instructions for restoring service outages after the emergency has been rendered safe				
	.615(a)(10)	Investigating accidents and failures as soon as possible after the emergency				
	.615(b)(1)	Furnishing applicable portions of the emergency plan to supervisory personnel who are responsible for emergency action				
	.615(b)(2)	Training appropriate employees as to the requirements of the emergency plan and verifying effectiveness of training				
	.615(b)(3)	Reviewing activities following emergencies to determine if the procedures were effective				
	.615(c)	Establish and maintain liaison with appropriate public officials, such that both the operator and public officials are aware of each other's resources and capabilities in dealing with gas emergencies				

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.605(a)	PUBLIC EDUCATION PROCEDURES		S	U	N/A	N/C
	.616	Establishing a continuing educational program (in English and other pertinent languages) to better inform the public in how to recognize and report potential gas pipeline emergencies				

Comments: (If any of the above are marked U, N/A, or N/C, please indicate why, either in this box or in a referenced note.)

.617	FAILURE INVESTIGATION PROCEDURES		S	U	N/A	N/C
	.617	Analyzing accidents and failures including laboratory analysis where appropriate to determine cause and prevention of recurrence				

Comments: (If any of the above are marked U, N/A, or N/C, please indicate why, either in this box or in a referenced note.)

.605(a)	MAOP PROCEDURES		S	U	N/A	N/C
	.619	Establishing MAOP so that it is commensurate with the class location				
	MAOP can be determined by:					
	(a)	Design and test or				
	(b)	By highest operating pressure to which the segment of line was subjected between July 1, 1965 and July 1, 1970 . In case of offshore gathering lines, for the 5 years preceding July 1, 1976				

Comments: (If any of the above are marked U, N/A, or N/C, please indicate why, either in this box or in a referenced note.)

.13(c)	PRESSURE TEST PROCEDURES		S	U	N/A	N/C
	.503	Pressure testing				

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.605(a)	ODORIZATION of GAS PROCEDURES		S	U	N/A	N/C
	.625(b)	Odorized gas in Class 3 or 4 locations (if applicable) – must be readily detectable by person with normal sense of smell at $\frac{1}{5}$ of the LEL				
	(f)	Periodic gas sampling, using an instrument capable of determining the percentage of gas in air at which the odor becomes readily detectable				

Comments: (If any of the above are marked U, N/A, or N/C, please indicate why, either in this box or in a referenced note.)

.605(a)	TAPPING PIPELINES UNDER PRESSURE PROCEDURES		S	U	N/A	N/C
	.627	Hot taps must be made by a qualified crew				
		Note: NDT testing is suggested prior to the tap per Section 4.4, API 2201				

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.605(a)	PIPELINE PURGING PROCEDURES		S	U	N/A	N/C
	.629	Purging of pipelines must be done to prevent entrapment of an explosive mixture in the pipeline				
	(a)	Lines containing air must be properly purged.				
	(b)	Lines containing gas must be properly purged				

Comments: (If any of the above are marked U, N/A, or N/C, please indicate why, either in this box or in a referenced note.)

.605(b)	MAINTENANCE PROCEDURES		S	U	N/A	N/C
	.703(b)	Each segment of pipeline that becomes unsafe must be replaced, repaired, or removed from service				
	(c)	Hazardous leaks must be repaired promptly				

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.605(b)	TRANSMISSION PATROLLING PROCEDURES		S	U	N/A	N/C
	.705(a)	Patrolling ROW conditions				
	(b)	Maximum interval between patrols of lines				

Class Location	At Highway and Railroad Crossings	At All Other Places
1 and 2	2/yr (7½ months)	1/yr (15 months)
3	4/yr (4½ months)	2/yr (7½ months)
4	4/yr (4½ months)	4/yr (4½ months)

.605(b)	TRANSMISSION LINE LEAKAGE SURVEY PROCEDURES		S	U	N/A	N/C
	.706	Leakage surveys – 1 per year/15 months				
		Leak detector equipment survey requirements for lines transporting unodorized gas:				
	(a)	Class 3 locations - 7½ months but at least twice each calendar year				
	(b)	Class 4 locations - 4½ months but at least 4 times each calendar year				

.605(b)	DISTRIBUTION SYSTEM PATROLLING SURVEY PROCEDURES		S	U	N/A	N/C
	.721(a)	Frequency of patrolling mains must be determined by the severity of the conditions which could cause failure or leakage (i.e., consider cast iron, weather conditions, known slip areas, etc.)				
	(b)(1)	Patrolling surveys are required in business districts at intervals not exceeding 4½ months, but at least four times each calendar year				
	(b)(2)	Patrolling surveys are required outside business districts at intervals not exceeding 7½ months, but at least twice each calendar year				

Comments: (If any of the above are marked U, N/A, or N/C, please indicate why, either in this box or in a referenced note.)

.605(b)	LINE MARKER PROCEDURES		S	U	N/A	N/C
	.707	Line markers installed and labeled as required				

Comments: (If any of the above are marked U, N/A, or N/C, please indicate why, either in this box or in a referenced note.)

.605(b)	TRANSMISSION RECORD KEEPING PROCEDURES		S	U	N/A	N/C
	.709	Records must be maintained...				
	(a)	Repairs to the pipe – life of system				
	(b)	Repairs to pipeline components – 5 years				
	(c)	Oper. (Sub L) and Maint. (Sub M) patrols, surveys, tests – 5 years or until next one				

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.605(b)	TRANSMISSION REPAIR PROCEDURES – IMPERFECTIONS and DAMAGES	S	U	N/A	N/C

.605(b)	TRANSMISSION REPAIR PROCEDURES – PERMANENT FIELD REPAIR of WELDS	S	U	N/A	N/C

.605(b)	TRANSMISSION REPAIR PROCEDURES – PERMANENT FIELD REPAIRS of LEAKS	S	U	N/A	N/C

.605(b)	TRANSMISSION TESTING of REPAIRS PROCEDURES	S	U	N/A	N/C

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.605(b)	ABANDONMENT or DEACTIVATION of FACILITIES PROCEDURES	S	U	N/A	N/C
	.727 (b) Operator must disconnect both ends, purge, and seal each end before abandonment or a period of deactivation where the pipeline is not being maintained. Offshore abandoned pipelines must be filled with water or an inert material, with the ends sealed				
	(c) Except for service lines, each inactive pipeline that is not being maintained under Part 192 must be disconnected from all gas sources/supplies, purged, and sealed at each end.				
	(d) Whenever service to a customer is discontinued, do the procedures indicate one of the following:				
	(1) The valve that is closed to prevent the flow of gas to the customer must be provided with a locking device or other means designed to prevent the opening of the valve by persons other than those authorized by the operator				
	(2) A mechanical device or fitting that will prevent the flow of gas must be installed in the service line or in the meter assembly				
	(3) The customer's piping must be physically disconnected from the gas supply and the open pipe ends sealed				
	(e) If air is used for purging, the operator shall ensure that a combustible mixture is not present after purging				
	(g) Operator must file reports upon abandoning underwater facilities crossing navigable waterways, including offshore facilities				

Comments: (If any of the above are marked U, N/A, or N/C, please indicate why, either in this box or in a referenced note.)

.605(b)	PRESSURE LIMITING and REGULATING STATION PROCEDURES	S	U	N/A	N/C
	.739 Inspection and testing procedures for pressure limiting stations, relief devices, pressure regulating stations and equipment (1 per yr/15 months)				
	(a) In good mechanical condition				
	(b) Adequate from the standpoint of capacity and reliability of operation for the service in which it is employed				
	(c) Set to control or relieve at correct pressures consistent with §192.201(a)				
	(d) Properly installed and protected from dirt, liquids or other conditions that might prevent proper operation				
	.741 Telemetering or Recording Gauges				
	(a) In place to indicate gas pressure in the district that is supplied by more than one regulating station				
	(b) Determine the need in a distribution system supplied by only one district station				
	(c) Inspect equipment and take corrective measures when indications of abnormally high or low pressure				
	.743 Testing of Relief Devices				
	(a) Relief device capacities must be determined (1 per yr/15 months)				
	(b) Calculated capacities must be compared, annual review and documentation is required				
	(c) If insufficient capacity, new or additional devices must be installed				

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.605(b)	TRANSMISSION VALVE MAINTENANCE PROCEDURES			S	U	N/A	N/C
	.745	(a)	Inspect and partially operate each transmission valve that might be required during an emergency (1 per yr/15 months)				
		(b)	Prompt remedial action required, or designate alternative valve				

.605(b)	DISTRIBUTION VALVE MAINTENANCE PROCEDURES			S	U	N/A	N/C
	.747	(a)	Check and service each valve that may be necessary for the safe operation of a distribution system (1 per yr/15 months)				
		(b)	Prompt remedial action required, or designate alternative valve				

.605(b)	VAULT MAINTENANCE PROCEDURES			S	U	N/A	N/C
	.749	Inspection of vaults greater than 200 cubic feet (1 per yr/15 months)					

Comments: (If any of the above are marked U, N/A, or N/C, please indicate why, either in this box or in a referenced note.)

.605(b)	PREVENTION of ACCIDENTAL IGNITION PROCEDURES			S	U	N/A	N/C
	.751	Reduce the hazard of fire or explosion by:					
		(a)	Removal of ignition sources in presence of gas and providing for a fire extinguisher				
		(b)	Prevent welding or cutting on a pipeline containing a combustible mixture				
		(c)	Post warning signs				

Comments: (If any of the above are marked U, N/A, or N/C, please indicate why, either in this box or in a referenced note.)

.605(b)	CAULKED BELL AND SPIGOT JOINTS PROCEDURES			S	U	N/A	N/C
	.753	Cast-iron caulked bell and spigot joint repair:					
		(a)	When subject to more than 25 psig, sealed with mechanical clamp, or sealed with material/device which does not reduce flexibility, permanently bonds, and seals and bonds as prescribed in §192.753(a)(2)(iii)				
		(b)	When subject to 25 psig or less, joints, when exposed for any reason, must be sealed by means other than caulking				

.605(b)	PROTECTING CAST-IRON PIPELINE PROCEDURES			S	U	N/A	N/C
	.755	Operator has knowledge that the support for a segment of a buried cast-iron pipeline is disturbed must provide protection.					
		(a)	Vibrations from heavy construction equipment, trains, trucks, buses or blasting?				
		(b)	Impact forces by vehicles?				
		(c)	Earth movement?				
		(d)	Other foreseeable outside forces which might subject the segment of pipeline to a bending stress				
		(e)	Provide permanent protection for the disturbed section as soon as feasible				

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.13(c)	WELDING PROCEDURES		S	U	N/A	N/C
	.225	Welding procedures must be qualified by destructive test				
	?	Sleeve repair – low hydrogen rod				
	?	Retention of welding procedure – details and test				
	.227	(a) Welders must be qualified by Section 3 of API 1104 (18 th ed., 1994) or Section IX of ASME Boiler and Pressure Code (1995)				
		(b) Welder may be qualified under Appendix C to weld on lines that operate at < 20% SMYS				
	.229	Limitations on Welders:				
	(a)	To weld on compressor station piping and components, a welder must successfully complete a destructive test				
	(b)	Welder must have used welding process within the preceding 6 months				
	(c)	A welder must have had within the preceding 6 months , one weld tested and found acceptable under Section 3 of API 1104				
	(d)	Welders qualified for less than 20% of SMYS pipe may not weld unless:				
	(1)	Requalified within 1 year/15 months , or				
	(2)	Within 7½ months or at least twice per year had a production weld pass a qualifying				
	.231	Welding operation must be protected from weather				
	.233	Miter joints (consider pipe alignment)				
	.235	Welding preparation and joint alignment				
	.241	(a) Each weld must be visually inspected for:				
	(1)	Compliance with the welding procedure				
	(2)	Acceptability of weld is in accordance with Section 6 of API 1104				
	(b)	Welds on pipelines to be operated at 20% or more of SMYS must be nondestructively tested in accordance with §192.243 except welds that are visually inspected and approved by a qualified welding inspector if:				
	(1)	The nominal pipe diameter is less than 6 inches , or				
	(2)	The pipeline is to operate at a pressure that produces a hoop stress of less than 40% of SMYS and the welds are so limited in number that nondestructive testing is impractical				

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.243	NONDESTRUCTIVE TESTING PROCEDURES				S	U	N/A	N/C
.243	(a)	Nondestructive testing of welds must be performed by any process, other than trepanning, that clearly indicates defects that may affect the integrity of the weld						
	(b)	Nondestructive testing of welds must be performed:						
		(1) In accordance with a written procedure, and						
		(2) By persons trained and qualified in the established procedures and with the test equipment used						
	(c)	Procedures established for proper interpretation of each nondestructive test of a weld to ensure acceptability of the weld under §192.241(c)						
	(d)	When nondestructive testing is required under §192.241(b), the following percentage of each day's field butt welds, selected at random by the operator, must be nondestructively tested over the entire circumference						
		(1) In Class 1 locations at least 10%						
		(2) In Class 2 locations at least 15%						
		(3) In Class 3 and 4 locations, at crossings of a major navigable river, offshore, and within railroad or public highway rights-of-way, including tunnels, bridges, and overhead road crossings, 100% unless impractical, then 90% . Nondestructive testing must be impractical for each girth weld not tested.						
		(4) At pipeline tie-ins, 100%						
	(e)	Except for a welder whose work is isolated from the principal welding activity, a sample of each welder's work for each day must be nondestructively tested, when nondestructive testing is required under §192.241(b)						
	(f)	Nondestructive testing – the operator must retain, for the life of the pipeline, a record showing by mile post, engineering station, or by geographic feature, the number of welds nondestructively tested, the number of welds rejected, and the disposition of the rejected welds.						

Comments: (If any of the above are marked U, N/A, or N/C, please indicate why, either in this box or in a referenced note.)

.13(c)	REPAIR and REMOVAL of WELD DEFECTS PROCEDURES				S	U	N/A	N/C
.245	(a)	Each weld that is unacceptable must be removed or repaired. Except for offshore pipelines, a weld must be removed if it has a crack that is more than 8% of the weld length						
	(b)	Each weld that is repaired must have the defect removed down to sound metal, and the segment to be repaired must be preheated if conditions exist which would adversely affect the quality of the weld repair. After repair, the weld must be inspected and found acceptable						
	(c)	Repair of a crack or any other defect in a previously repaired area must be in accordance with a written weld repair procedure, qualified under §192.225						

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.273(b)			S	U	N/A	N/C
	.281	Joining of plastic pipe				
	?	Type of plastic used				
	?	Proper markings in accordance with §192.63				
	?	Manufacturer				
	?	Type of joint used				
	.283	Qualified joining procedures for plastic pipe must be in place				
	.285	Persons making joints with plastic pipe must be qualified				
	.287	Persons inspecting plastic joints must be qualified				

Comments: (If any of the above are marked U, N/A, or N/C, please indicate why, either in this box or in a referenced note.)

.605(b)			S	U	N/A	N/C
	CORROSION CONTROL PROCEDURES					
	.453	Are corrosion procedures established for:				
	?	Design				
	?	Operations				
	?	Installation				
	?	Maintenance				
	.455	(a) For pipelines installed after July 31, 1971 , buried segments must be externally coated and &(b) cathodically protected with one year after construction (see exceptions in code)				
		(e) Aluminum may not be installed in a buried or submerged pipeline if exposed to an environment with a natural pH in excess of 8 (see exceptions in code)				
	.457	(a) All effectively coated steel transmission pipelines installed prior to August 1, 1971 , must be cathodically protected				
		(b) If installed before August 1, 1971 , cathodic protection must be provided in areas of active corrosion for: bare or ineffectively coated transmission lines, and bare or coated c/s, regulator station, and meter station piping, and bare or coated distribution lines.				
	.459	Examination of buried pipeline when exposed: if corrosion is found, further investigation is required				
	.461	Procedures must address the protective coating requirements of the regulations. External coating on the steel pipe must meet the requirements of this part.				
	.463	Cathodic protection level according to Appendix D criteria				
	.465	(a) Pipe-to-soil monitoring (1 per yr/15 months)				
		(b) Rectifier monitoring (6 per yr/2½ months)				
		(c) Interference bond monitoring (as required)				
		(d) Prompt remedial action to correct any deficiencies indicated by the monitoring				
		(e) Electrical surveys on bare/unprotected lines, cathodically protect active corrosion areas (1 per 3 years/39 months)				
	.467	Electrical isolation (include casings)				
	.469	Sufficient test stations to determine CP adequacy				
	.471	Test lead maintenance				

STANDARD INSPECTION REPORT OF A GAS DISTRIBUTION OPERATOR

Unless otherwise noted, all code references are to Part 192.

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked

CORROSION CONTROL PROCEDURES		S	U	N/A	N/C
.473	Interference currents				
.475	(a) Proper procedures for transporting corrosive gas?				
	(b) Removed pipe must be inspected for internal corrosion. If found, the adjacent pipe must be inspected to determine extent. Certain pipe must be replaced. Steps must be taken to minimize internal corrosion.				
.477	Internal corrosion control coupon (or other suit. means) monitoring (2 per yr/7½ months)				
.479	(a) Each exposed pipe must be cleaned and coated (see exceptions under .479(c)) Offshore splash zones and soil-to-air interfaces must be coated				
	(b) Coating material must be suitable				
	(c) Coating is not required where operator has proven that corrosion will:				
	(1) Only be a light surface oxide, or				
	(2) Not affect safe operation before next scheduled inspection				
.481	(a) Atmospheric corrosion control monitoring (1 per 3 yrs/39 months onshore; 1 per yr/15 months offshore)				
	(b) Special attention required at soil/air interfaces, thermal insulation, under disbonded coating, pipe supports, splash zones, deck penetrations, spans over water				
	(c) Protection must be provided if atmospheric corrosion is found (per §192.479)				
.483	Replacement and repaired pipe must be coated and cathodically protected (see code for exceptions)				
.485	(a) Transmission: Procedures to replace pipe or reduce the MAOP if general corrosion has reduced the wall thickness?				
	(b) Transmission: Procedures to replace/repair pipe or reduce MAOP if localized corrosion has reduced wall thickness (unless reliable engineering repair method exists)?				
	(c) Transmission: Procedures to use Rstreng or B-31G to determine remaining wall strength?				
.487	Remedial measures (distribution lines other than cast iron or ductile iron)				
.489	Remedial measures (cast iron and ductile iron pipelines)				
.491	Corrosion control maps and record retention (pipeline service life or 5 yrs)				

Comments: (If any of the above are marked U, N/A, or N/C, please indicate why, either in this box or in a referenced note.)

.801	Subpart N — Qualification of Pipeline Personnel Procedures	S	U	N/A	N/C
	.801 - .809 Refer to Operator Qualification Inspection Forms and Protocols (OPS web page)				
.001	Subpart O — Pipeline Integrity Management	S	U	N/A	N/C
	.901 - .951 This form does not cover Gas Pipeline Integrity Management Programs				

STANDARD INSPECTION REPORT OF A GAS DISTRIBUTION OPERATOR

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Best Practice:

What process does the operator have to address Alert Notices:

Comments:

Best Practice: Stress Corrosion Cracking

Pipeline Safety Advisory Bulletin ADB-03-05 – October 8, 2003

Reference <http://www.gpoaccess.gov/fr/advanced.html> (fr06oc03N Pipeline Safety: Stress Corrosion Cracking (SCC) Threat to Gas and Liquid Pipelines).

Is the operator aware of the bulletin, and is the operator reviewing their system for the potential of SCC?

Y/N _____

Best Practices: Damage Prevention

(If operator's damage prevention best practices answers have not changed since the previous inspection and are noted as such, then completion of the below 7 questions is not required).

1. Does the operator's damage prevention program include actions to protect their facilities when directional drilling or boring operations are conducted in proximity to the facilities? Y/N _____
2. Does the operator's damage prevention program include proactive liaison with public construction project and land-use officials, engineers, and contractors? Y/N _____
3. Does the operator's damage prevention program include proactive liaison with local school officials, where transmission pipelines traverse or are adjacent to school property? Y/N _____
4. Has the operator reviewed the "Common Ground" Study of One Call Systems and Damage Prevention Best Practices? Y/N _____
5. Has the operator compared and measured the best practices against existing damage prevention practices contained in the operator's damage prevention plan? Y/N _____
6. Has the operator implemented any of the best practices in addition to their existing damage prevention activities subsequent to review of the Common Ground Study? Y/N _____
7. Has the operator improved communication with other stakeholders in damage prevention as a result of the best practices? Y/N _____

Damage Prevention Comments:

STANDARD INSPECTION REPORT OF A GAS DISTRIBUTION OPERATOR

Unless otherwise noted, all code references are to Part 192.

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked

PIPELINE INSPECTION (Field)			S	U	N/A	N/C
.179		Valve Protection from Tampering or Damage				
.463		Cathodic Protection				
.465		Rectifiers				
.479		Pipeline Components Exposed to the Atmosphere				
.605		Knowledge of Operating Personnel				
.612(b)		Water Crossings (If Applicable)				
.707		ROW Markers, Road and Railroad Crossings				
.719		Pre-pressure Tested Pipe (Markings and Inventory)				
.739		Pressure Limiting and Regulating Devices (Mechanical)				
.743		Pressure Limiting and Regulating Devices (Capacities)				
.745		Valve Maintenance				
.751		Warning Signs				
.801 - .809		Operator Qualification Questions – See Attachment 3				

OPERATIONS and MAINTENANCE RECORDS			S	U	N/A	N/C
191.11		Annual Report (Form 7100.1-1)				
191.17		Annual Report – transmission lines (Form 7100.2-1)				
.16		Customer Notification (verification – 90 days – and elements)				
.517	(a)	Pressure Testing (operates at or above 100 psig) – useful life of pipeline				
	(b)	Pressure Testing (operates below 100 psig, service lines, plastic lines) – 5 years				
.603(b)	.605(a)	Procedural Manual Review – Operations and Maintenance (1 per yr/15 months)				
	.605(c)	Abnormal Operations – transmission lines				
	.605(b)(3)	System Maps				
.709	.609	Class Location Study (If Applicable)				
	.614	Damage Prevention (miscellaneous)				
.603(b)	.615(c)	Liaison Program with Public Officials				
	.616	Public Education				
.709	.619	Maximum Allowable Operating Pressure (MAOP)				
	.625	Odorization of Gas				
	.705	Patrolling (Refer to Table Below)				

Class Location	At Highway and Railroad Crossings	At All Other Places
1 and 2	2/yr (7½ months)	1/yr (15 months)
3	4/yr (4½ months)	2/yr (7½ months)
4	4/yr (4½ months)	4/yr (4½ months)

.603(b)/.70	.706	Leak Surveys (Refer to Table Below)				
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Class Location	Required	Not Exceed
1 and 2	1/yr	15 months
3	2/yr	7½ months
4	4/yr	4½ months

STANDARD INSPECTION REPORT OF A GAS DISTRIBUTION OPERATOR

Unless otherwise noted, all code references are to Part 192.

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked

OPERATIONS and MAINTENANCE RECORDS (con't)			S	B	N/A	N/C
.603(b)	.721(b)(1)	Patrolling Business District (4 per yr/4½ months)				
	.721(b)(2)	Patrolling Outside Business District (2 per yr/7½ months)				
	.723(b)(1)	Leakage Survey – business District (1 per yr/15 months)				
	.723(b)(2)	Leakage Survey				
	?	Outside Business District (5 years)				
	?	Cathodically unprotected distribution lines (3 years)				
.709		Repair: Pipe (Pipeline Life); Other than Pipe (5 years)				
.603b/.727g	.727	Abandoned Pipelines; Underwater Facility Reports				
.603(b)/.70	.739	Pressure Limiting and Regulating Stations (1 per yr/15 months)				
	.743	Pressure Limiting and Regulator Stations – Capacity (1 per yr/15 months)				
.709	.745	Valve Maintenance Transmission Lines (1 per yr/15 months)				
.603(b)	.747	Valve Maintenance Distribution Lines (1 per yr/15 months)				
.603(b)/.70	.749	Vault Maintenance (\$200 cubic feet)(1 per yr/15 months)				
.603(b)	.755	Caulked Bell and Spigot Joint Repair				
	.225(b)	Welding – Procedure				
	.227/.229	Welding – Welder Qualification				
	.243(b)(2)	NDT – NDT Personnel Qualification				
.709	.243(f)	NDT Records (Pipeline Life)				

CORROSION CONTROL RECORDS			S	U	N/A	N/C
.491	.491(a)	Maps or Records				
	.459	Examination of Buried Pipe when Exposed				
	.465(a)	Annual Pipe-to-soil Monitoring (1 per yr/15 months)				
	.465(b)	Rectifier Monitoring (6 per yr/2½ months)				
	.465(c)	Interference Bond Monitoring – Critical (6 per yr/2½ months)				
		Interference Bond Monitoring – Noncritical (1 per yr/15 months)				
	.465(d)	Prompt Remedial Actions				
	.465(e)	Unprotected Pipeline Surveys, CP active corrosion areas (1 per 3 cal yr/39 months)				
	.467	Electrical Isolation (Including Casings)				
	.471	Test Lead Maintenance				
	.473	Interference Currents				
	.475(a)	Internal Corrosion; Corrosive Gas Investigation				
	.475(b)	Internal Corrosion; Internal Surface Inspection; Pipe Replacement				
	.477	Internal Corrosion Control Coupon Monitoring (2 per yr/7½ months)				
	.481	Atmospheric Corrosion Control Monitoring (1 per 3 cal yr/39 months onshore; 1 per yr/15 months offshore)				
	.483	Remedial Measures: Replaced or repaired pipe; coated and protected				
	.485	Transmission Remedial Measures: Corrosion evaluation and actions				

Comments: (If any of the above are marked U, N/A, or N/C, please indicate why, either in this box or in a referenced note.)

Attachment 1

Internal Corrosion Worksheet – Natural Gas Pipelines

NOTE: Refer to OPS Enforcement Manual, Code Compliance Guidelines PART 192, SUBPART I: CORROSION CONTROL for Internal Corrosion

1. Are internal corrosion control procedures established? Y ____ N ____
2. Is gas quality analysis done on a periodic basis for O_2 , H_2O , H_2S , and CO_2 ? Y ____ N ____
3. Does operator inject corrosion inhibitor to mitigate internal corrosion? Y ____ N ____
4. Each coupon utilized or other means of monitoring internal corrosion must be checked two times each calendar year, but with interval not exceeding 7½ months. Y ____ Y ____
5. Does operator control internal corrosion effects caused by water by dehydration and water-soluble inhibitors? Y ____ N ____
6. Does the operator pig their pipelines to remove any water or sludge buildups (sample analysis should be performed)? Y ____ N ____
7. Whenever pipe is removed (including coupons removed during hot taps), is it examined for evidence of internal corrosion? Y ____ N ____
8. Does the operator track internal corrosion and take corrective action to prevent recurrence? Y ____ N ____
9. Which method does the operator utilize to determine the effectiveness of its corrosion inhibition program?
 - ____ Gas and fluid analysis
 - ____ Rates of pipeline corrosion as determined by coupons
 - ____ Solids removed from the system
 - ____ Analysis of inhibitor samples from the pipeline
 - ____ Magnetic and electronic device (pigs)
 - ____ Other
10. Is the inhibitor compatible with the product being transported? Y ____ N ____ N/A ____
11. Is gas containing more than 0.25 grain of H_2S per 100 standard cubic feet being stored in pipe-type or bottle-type holders?
Y ____ N ____ N/A ____
12. Does the operator analyze water samples relating to corrosion activity at drips downstream of compressor stations, dehydration, and/or gas processing plants? Y ____ N ____ N/A ____
13. Has the operator identified low points throughout their system where fluids are likely to accumulate, and does the operator identify how to remove the fluids from the lines? Y ____ N ____

Does the operator specify the frequency in how often the fluids are removed? Y ____ N ____
14. Does the operator address fluid accumulation in unpiggable lines (i.e., fluid samples, coupons, etc.)? Y ____ N ____ N/A ____

Comments:

Attachment 2

SCADA Gas Worksheet

The topics on this worksheet regard general SCADA functionality. A more thorough SCADA evaluation may be warranted based on the results of this worksheet or prompts by other events.

1. **Pipeline Safety Advisory Bulletins** (reference <http://www.gpoaccess.gov/fr/advanced.html>)

Review the following with the operator:

- ? **July 7, 1999 Advisory Bulletin ADB-99-03** (Ref. fr16jy99N Potential Service Interruptions in Supervisory Control and Data Acquisition Systems) – Discuss SCADA system performance.
- ? **December 16, 2003 Advisory Bulletin ADB-03-09** (Ref. fr23de03N Pipeline Safety: Potential Service Disruptions in Supervisory Control and Data Acquisition Systems) – Discuss consideration of possible SCADA system disruptions caused by system maintenance or upgrade.

Comments:

Operators may choose to use SCADA, or other forms of automation, to comply with the Pipeline Safety Regulations. The following code subsections could apply if a SCADA system is utilized.

2. **§192.605(c)(1)(iii) – Loss of Communications**

- ? Offsite Backup Center
- ? Data Transfer to Redundant or Offsite Processors
- ? Battery and/or Emergency Generator
- ? Redundant Data Communications Paths, Automatic Restoration or Manual
- ? Data Reduction & Archiving
- ? Indication of Stale, Forced or Manually Overridden Data, or System Lockup
- ? Operating Practices During Data Communication Outages

Comments:

3. **§192.731(c) & .745 – Testing SCADA Controlled Valves and Safety Devices**

- ? Frequency and Scope in Testing of SCADA Controlled Devices' Functionality
- ? Inclusion of SCADA Component in the Tests
- ? Frequency and Scope of Testing Emergency Shutdown Devices

Comments:

Attachment 2

SCADA Gas Worksheet

4. **§192.603 General provisions**

(b) Each operator shall keep records necessary to administer the procedures established under §192.605.

- ? Ensure SCADA screens/status board are updated to reflect current pipeline configurations
- ? Ensure pipeline safety parameters are current (i.e., MAOP, alarm set points, etc.)
- ? Review any emergency or abnormal operating condition records generated by the SCADA system (alarm logs, trending data, etc.). Compare abnormal operating conditions noted in the SCADA data with the Operator's report and reporting procedures as related to those abnormal operating conditions.

Comments:

Attachment 3

Operator Qualification Worksheet

The following questions are to be used by the inspector to provide information in determining a need for a more intensive OQ field inspection.

1. Do the supervisors know what actions to take, as required by the operator's OQ program, when an individual's performance of a covered task may have contributed to an incident?

Comments: *(If Unsatisfactory, please indicate why, either in this box or in a referenced note.)*

2. Do the supervisors know what actions to take, as required by the operator's OQ program, when an individual is identified who may no longer be qualified to perform a covered task?

Comments: *(If Unsatisfactory, please indicate why, either in this box or in a referenced note.)*

3. Do the individuals performing covered tasks know how to recognize and react to abnormal operating conditions (AOCs) that may be encountered while performing tasks?

Comments: *(If Unsatisfactory, please indicate why, either in this box or in a referenced note.)*

4. Are the employee and/or contractor individuals observed performing covered tasks qualified per OQ program requirements? (Documentation may be a hardcopies or database records available at the job site or local office.)

Comments: *(If Unsatisfactory, please indicate why, either in this box or in a referenced note.)*

5. Are the individuals who are observed performing covered tasks adhering to operator's procedures?

Comments: *(If Unsatisfactory, please indicate why, either in this box or in a referenced note.)*

Attachment 4

Distribution Operator Compressor Station Inspection

Unless otherwise noted, all code references are to Part 192.

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked

COMPRESSOR STATION PROCEDURES		S	B	N/A	N/C
.605(b)	.605(b)(6) Maintenance procedures, including provisions for isolating units or sections of pipe and for purging before returning to service				
	.605(b)(7) Starting, operating, and shut-down procedures for gas compressor units				
	.731 Inspection and testing procedures for remote control shut downs and pressure relieving devices (1 per yr/15 months); prompt repair or replacement				
	.735(a) Storage of excess flammable or combustible materials at a safe distance from the compressor buildings				
	(b) Tank must be protected according to NFPA #30				
.736	Compressor buildings in a compressor station must have fixed gas detection and alarm systems (must be performance tested), unless:				
	? 50% of the upright side areas are permanently open, or (removed unless)				
	? It is an unattended field compressor station of 1000 hp or less				

Comments: (If Unsatisfactory, please indicate why, either in this box or in a referenced note.)

COMPRESSOR STATION INSPECTION (Field)		S	B	N/A	N/C
.163	(c) Main operating floor must have (at least) two (2) separate and unobstructed exits				
	Door latch must open from inside without a key				
	Doors must swing outward				
	(d) Each fence around a compressor station must have (at least) 2 gates or other facilities for emergency exit				
	Each gate located within 200 ft of any compressor plant building must open outward				
.165	(e) When occupied, the door must be opened from the inside without a key				
	Does the equipment and wiring within compressor stations conform to the Nat'l Electric Code, ANSI/NFPA 70?				
.167	(a) If applicable, are there liquid separator(s) on the intake to the compressors?				
	(b) Do the liquid separators have a manual means of removing liquids?				
	If slugs of liquid could be carried into the compressors, are there automatic dumps on the separators, automatic compressor shut-down devices, or high liquid level alarms?				
	(a) ESD system must:				
	? Discharge blowdown gas to safe location				
	? Block and blowdown the gas in the station				
	? Shut down gas compressing equipment, gas fires, electrical facilities in compressor building and near gas headers				
	? Maintain necessary electrical circuits for emergency lighting and circuits needed to protect equipment from damage				
	ESD system must be operable from at least two locations, each of which is:				
	? ESD switches near emergency exits?				
	(b) For stations supplying gas directly to distribution systems, is the ESD system configured so that the LDC will not be shut down if the ESD is activated?				
	(c) Are ESDs on platforms designed to actuate automatically by:				
	? For unattended compressor stations when:				
	o The gas pressure equals MAOP plus 15 percent?				
	o An uncontrolled fire occurs on the platform?				
	? For compressor station in a building when:				
	o An uncontrolled fire occurring in the building?				
	o Gas in air reaching 50 percent or more of LEL in a building with a source of ignition (facility conforming to NEC Class 1, Group D is not a source of ignition)?				
	.171 (a) Does the compressor station have adequate fire protection facilities? If fire pumps are used, they must not be affected by the ESD system.				
	(b) Does the compressor station prime movers (other than electrical movers) have over-speed shutdown?				
	(c) Does the compressor units alarm or shut down in the event of inadequate cooling or lubrication of the unit(s)?				
	(d) Are the gas compressor units equipped to automatically stop fuel flow and vent the engine if the engine is stopped for any reason?				
	(e) Are the mufflers equipped with vents to vent any trapped gas?				

Attachment 4

Distribution Operator Compressor Station Inspection

Unless otherwise noted, all code references are to Part 192.

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked

COMPRESSOR STATION INSPECTION (Field)		S	B	N/A	N/C
.173	Is each compressor station building adequately ventilated?				
.457	Is all buried piping cathodically protected?				
.481	Atmospheric corrosion of aboveground facilities?				
.603	Does the operator have procedures for the start up and shut down of the station and/or compressor unit(s)?				
.615	Emergency plan for the station on site?				
.619	Review pressure recording charts and/or SCADA				
.707	Markers				
.731	Overpressure protection – reliefs or shut downs				
.735	Are combustible materials in quantities exceeding normal daily usage stored a safe distance from the compressor building?				
.736	Gas detection - location				

Comments: *(If Unsatisfactory, please indicate why, either in this box or in a referenced note.)*

COMPRESSOR STATION O&M RECORDS		S	B	N/A	N/C
.603(b)/.709	.731(a) Compressor Station Relief Devices (1 per yr/15 months)				
	.731(c) Compressor Station Emergency Shutdown (1 per yr/15 months)				
	.736(c) Compressor Stations – Detection and Alarms (Performance Test)				

Comments: *(If Unsatisfactory, please indicate why, either in this box or in a referenced note.)*

PIM Entry Examples

POST INSPECTION MEMORANDUM (PIM)			
Name of Operator	NoFail Pipeline Company	OPID#:	2314
Name of Unit(s):	Boardwalk and Parkplace	Unit #(s):	234, 278
Records Location:	Pipelineville, NC		
Unit Type & Commodity:			
Inspection Type:	Standard	Inspection Date(s):	12/24-27/03
OPS Representative(s):	John Brown	AFO Days:	4
Summary: <p>On December 24-27, I performed a standard inspection of the NoFail pipeline facilities contained in units 234 and 278. The evaluation report contains a component description of the two units. The inspection included a records and facilities review. A Joint O&M inspection was conducted in 2003 and no procedures were evaluated during this inspection. Pre-inspection preparation identified previous valve inspection violations: I reviewed all of the company's valve inspection records and five aboveground valve settings and did not identify any potential non-compliances. Right-of-way inspection and periodic cathodic protection checks were conducted between Chance, NC to Community Chest, NC and from Reading, SC to Ventnor, SC. The Mighty Big a Wet River crossing was evaluated for atmospheric corrosion.</p>			
Findings: <p>The pipeline facilities appeared to be well maintained and serious concerns were noted: surface rusting was observed at the Pipelineville compressor station. No pitting was observed. NoFail is in the process of repainting all of the aboveground piping at this facility.</p> <p>The following concerns were noted from the records review:</p> <ol style="list-style-type: none"> 1. The rectifiers in Unit 234 were inspected on 3 times in 2001, twice in 2002, and five times in 2003. Copies of the subject records were obtained. 2. The right-of-way in Unit 234 was densely overgrown such that aerial patrols would be ineffective. Pictures were taken of representative areas. 			